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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/884,998	06/21/2001	Takemori Takayama	980923A	5046
23850	7590	09/27/2006		EXAMINER
ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP 1725 K STREET, NW SUITE 1000 WASHINGTON, DC 20006				IP, SIKYIN
			ART UNIT	PAPER NUMBER
			1742	

DATE MAILED: 09/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/884,998	TAKAYAMA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Sikyin Ip	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 8/11/06.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 25-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 25-33 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | Paper No(s)/Mail Date. _____.   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____.                                   |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 25-33 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claims 25 and 33, the new matter expression

" said soft layer being attached to and between said inner and outer circumferential surfaces " is not supported by the specification as originally filed. Applicants are required to point out support from the specification as originally filed or delete the new matter.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422

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F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 25-33 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 22-25 of copending Application No. 11/367,432. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed bushing structure, microstructure, and hardness are overlapped claims of co-pending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

## **Claim Rejections - 35 USC § 103**

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c ) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 25-26 and 28-29 are rejected under 35 U.S.C. § 103 as being unpatentable over USP 6193820 to Girardello et al.

Girardello discloses the features including the claimed crawler belt bushing, three different hardened layers, hardness, microstructures, and its hardened outside layer to inner layer thickness ratio (Figures 7-8 and col. 5, lines 55-63; Figure 3, and col. 3, lines 59-67). In Figure 3, the two regions (softer layer) having mixed structure (ferrite, bainite, pearlite) are attached to the outer and inner circumferential surfaces. The difference between the reference(s) and the claims are as follows: Girardello does not explicitly disclose the inner layer is harder than the outer layer. But, the hardness according to Figures 1 and 7 are very close that either one could be higher or lower than the other. Furthermore, hardness on either layer exists in range and the range of the outer layer overlaps the inner layer. Therefore, optimization of a variable recognized in the art as a result-effective variable normally is considered to be within the ordinary skill of the art. See *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977).

With respect to the process limitations in the claims that the invention defined in a product-by-process claim is a product, not a process. *In re Bridgeford*, 357 F. 2d 679, 149 USPQ 55 (CCPA 1966). It is the patentability of the product claimed and not of the recited process steps which must be established. See *In re Brown*, 459 F. 2d 531, 173

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USPQ 685 (CCPA 1972) and In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976). The guidance that has been provided by court on this matter is

[i]f the product in a product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.

In re Thorpe, 777 F.2d 695, 227 USPQ 964, 966 (Fed. Cir. 1985).

With respect to the expression “being attached thereto” is interpreted as a soft layer positioned closer to the inner circumferential surface according to page 15, lines 7 to 17 of instant specification. Thus the claimed soft layer reads on ferrite + bainite mix in Figure 8 of said reference.

Claims 27 and 30-33 are rejected under 35 U.S.C. §103(a) as being unpatentable over reference as applied to claims above, and further in view of JP 401272719.

The claimed subject matter as is disclosed and rejected above by the cited reference(s) except for the bushing steel composition. However, JP 401272719 in page 3, Table 1 discloses the claimed bushing steel is merely a conventional steel for bushing in the same field of endeavor or the analogous metallurgical art. Accordingly, it would have been prima facie obvious for an ordinary skill artisan motivated by a reasonable expectation of success to heat treat bushing as taught by Girardello with conventional bushing steel in order to obtain all of the known benefits. In re LaVerne, et al., 108 USPQ 335.

### ***Claim Objections***

Claims 25-29 are objected to because of the following informalities: The word "banite" in claim 25, line 18 is a typographical error. Appropriate correction is required.

### **Response to Arguments**

Applicant's arguments filed August 11, 2006 have been fully considered but they are not persuasive.

Applicants' comparative sketches Figures 12 and 13 are noted. But, the support of said sketches from the disclosure as originally filed has not been provided.

Applicants' argument in the page 7 of instant remarks is noted. Assuming arguendo that applicants' sketches and

"~~said soft layer being attached to and between said inner and outer circumferential surfaces~~" have support; but, "soft layer" is merely a relative term, which also includes "martensite" as instantly claimed. Martensite structure is known harder than any of ferrite, pearlite, bainite, or sorbite structure.

Applicants' argument as set forth in page 7 of instant remarks is noted. But, according to page 15, lines 7-17 of specification as originally filed that "soft layer" is positioned closer to inner circumferential surface. "Closer to inner circumferential surface" does not mean the same as "immediately next to outer and inner circumferential surfaces". Thus the claimed soft layer reads on ferrite + bainite mix layer in Figure 8 of Girardello reference. Moreover, applicants' attention is directed to Figure 3, and col. 3, lines 59-67 of Girardello. The instant claimed soft layer reads on the mixed structure regions in Figure 3 of Girardello.

### **Conclusion**

All recited limitations in the instant claims have been met by the rejections as set forth above.

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Applicant is reminded that when amendment and/or revision is required, applicant should therefore specifically point out the support for any amendments made to the disclosure. See 37 C.F.R. § 1.121.

**Examiner Correspondence**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Ip whose telephone number is (571) 272-1241. The examiner can normally be reached on Monday to Friday from 5:30 A.M. to 2:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Roy V. King, can be reached on (571)-272-1244.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
SIKYIN IP  
PRIMARY EXAMINER  
ART UNIT 1742

S. Ip  
September 25, 2006